



## Lower Stillaguamish Pollution Identification and Correction (PIC) Program Accomplishments and Resources for Landowners

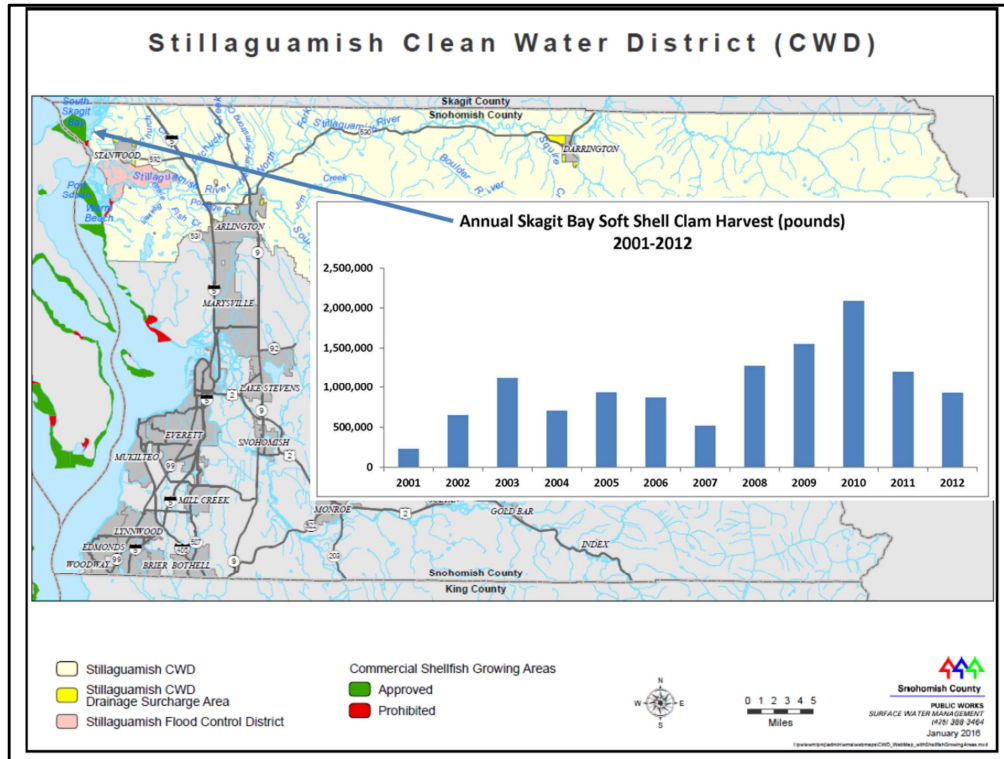
Presented by Sean Edwards, Sr. Planner  
Snohomish County Surface Water Management  
For the 8/13/16 Shellfish Dinner  
Floyd Norgaard Cultural Center  
Stanwood, WA

## Presentation Outline

- Lower Stilly PIC Overview
- Scope of Work and Accomplishments
- Resources for CWD Residents
- Next steps for PIC in the Stillaguamish CWD
- Acknowledgements

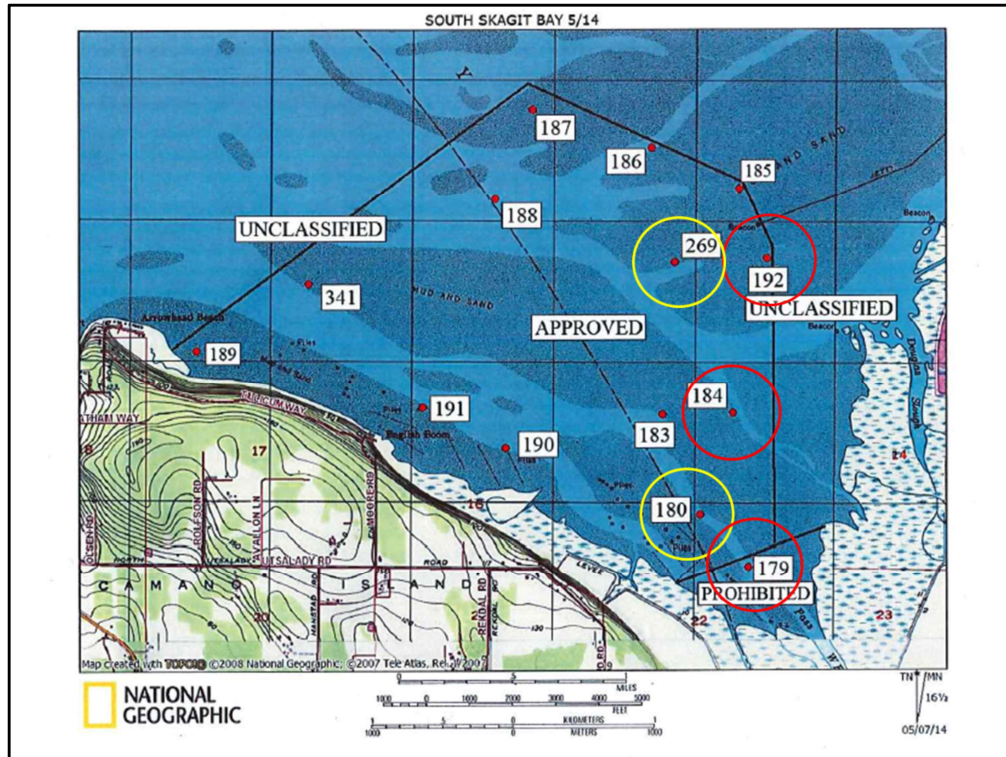


- So why go to all this effort? It's pretty simple: to protect all beneficial uses of our surface and ground water resources. We are working to achieve that goal by helping CWD residents be good stewards, fostering inter-agency cooperation, and by enforcing existing regulations when voluntary compliance is not happening.
- Pollution from the Lower Stillaguamish River Basin affects 4,950 acres of commercial shellfish growing areas as well as recreational water uses in South Skagit Bay, Port Susan, and the Stillaguamish River. In general, local water quality conditions are much better than they were in the 1980s when the shellfish growing areas were closed. Now our challenge is to protect our gains.

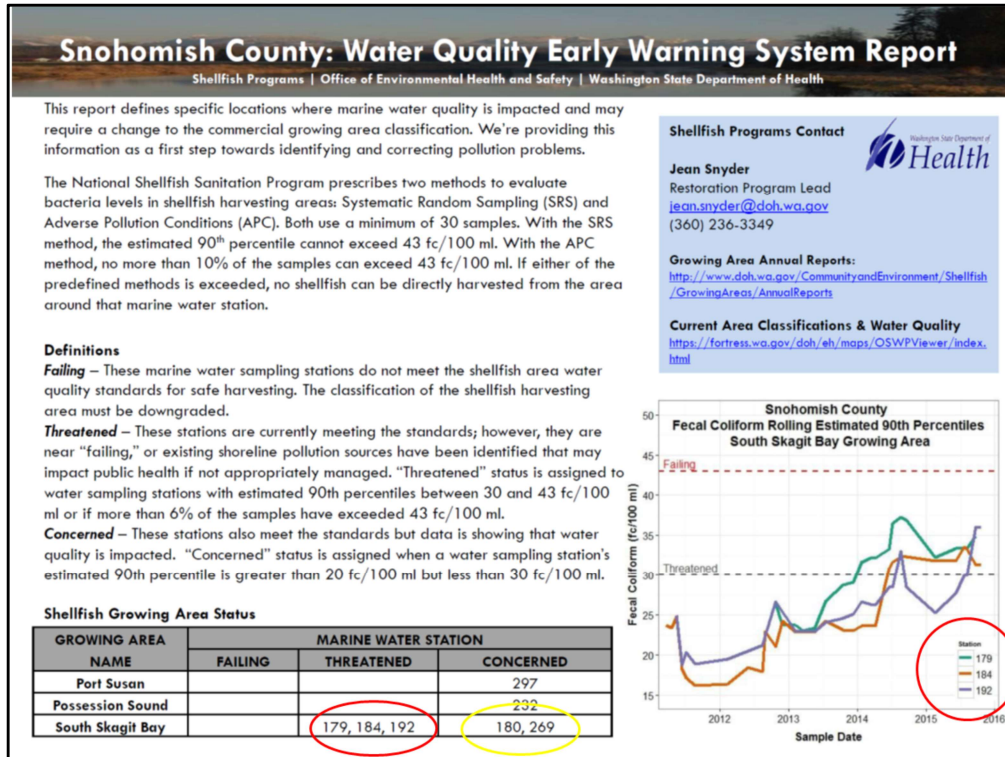


Before I tell you about our PIC accomplishments, I want to share a little known fact with all of you: Commercial harvest of eastern softshell clams in South Skagit Bay supplies hundreds of thousands of pounds per year to the East Coast market. As a local wholesale food supplier, this commercial shellfish harvest is quite similar to the local potato harvest, which also supplies the East Coast wholesale market.





But while the South Skagit Bay shellfish growing area is “Approved”, it is also threatened by ongoing pollution. This map shows the marine sampling stations in South Skagit Bay. The stations circled in red are currently designated by WDOH as “threatened” and the ones in yellow as “concerned”. Note their proximity to South Skagit Flats and West Pass of the Old Stillaguamish Channel.



These designations are well documented by WDOH. The 3 “threatened” stations have been above the 30 FC/100 mL threshold throughout the nearly 3-year period of implementation for the PIC Program. More information about this is available at the WDOH information table and on their web site.

## Lower Stilly PIC Program Overview

- **Purpose:** Identify and correct sources of bacterial and nutrient pollution in the Lower Stillaguamish River valley west of I-5
- **Timeframe:** November 2013 – September 2016
- **Managed by:** Snohomish County Public Works, Surface Water Management
- **Total Cost:** \$444,000
  - \$247,000 Snohomish County
  - \$197,000 Snohomish Conservation District

So I will now quickly describe some basic aspects of our Lower Stillaguamish PIC Program before getting into our accomplishments, which I will illustrate with a few good examples of how we have identified and corrected various sources of bacterial pollution.

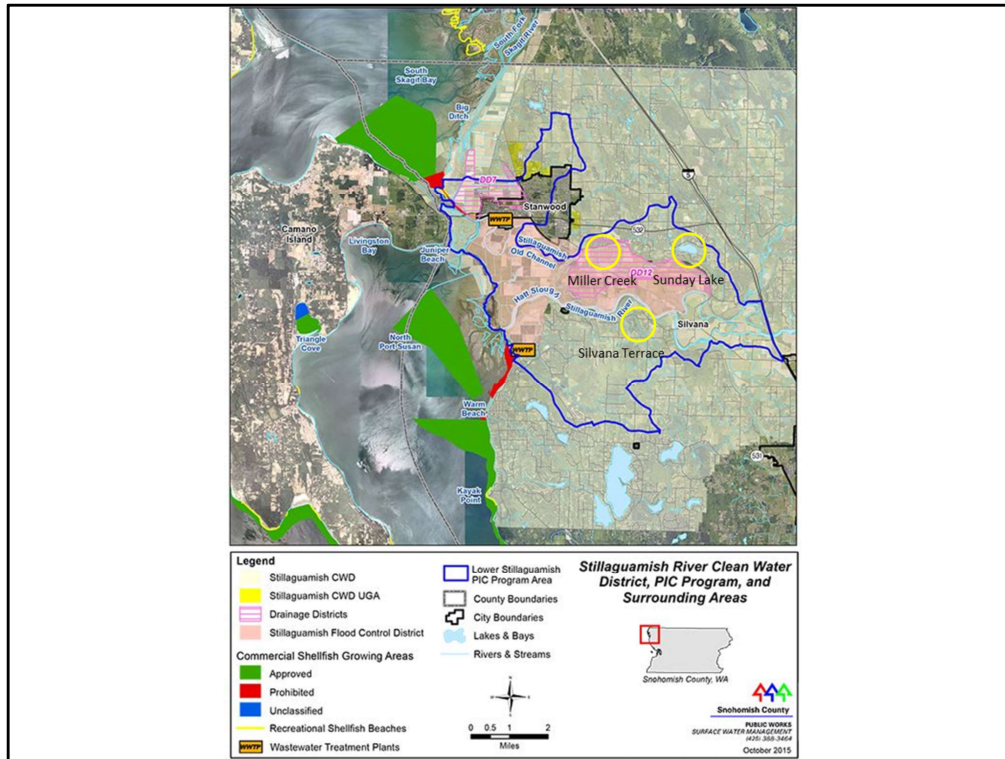
## Funding Source and Partners

- **Funding source:**
  - 100% EPA National Estuary Program (NEP) grant
  - Administered by WDOH in coordination with WDOE
- **Project partners/Lower Stilly PIC Advisory Committee:**
  - Snohomish Conservation District
  - Snohomish Health District
  - Washington Department of Agriculture
  - Washington Department of Ecology
  - Washington Department of Health
  - Stillaguamish Flood Control District
  - City of Stanwood
  - Stillaguamish Tribe
  - Stillaguamish Clean Water District Advisory Board

## Scope of Work and Accomplishments

- Inter-agency coordination
- Water quality monitoring
- Contaminant source investigation
- Pollution follow-up, technical assistance, and enforcement
- Outreach and education
- Cost share for clean-up projects

As we heard from Steve Britsch, Snohomish County and WSDA have done extensive water quality monitoring, which helped us identify priority areas for more focused pollution source investigations. Our pollution follow-up included technical assistance and some even-handed enforcement, which has led to implementation of important corrective actions. We have also done extensive outreach and education to raise public awareness about local water quality conditions and resources available to help people implement BMPs and other corrective actions. And to help people overcome the barrier of cost, we have provided various financial incentives. This scope of work represents an integrated science driven approach that also is respectful of the local community while still being accountable to existing policies and regulations.



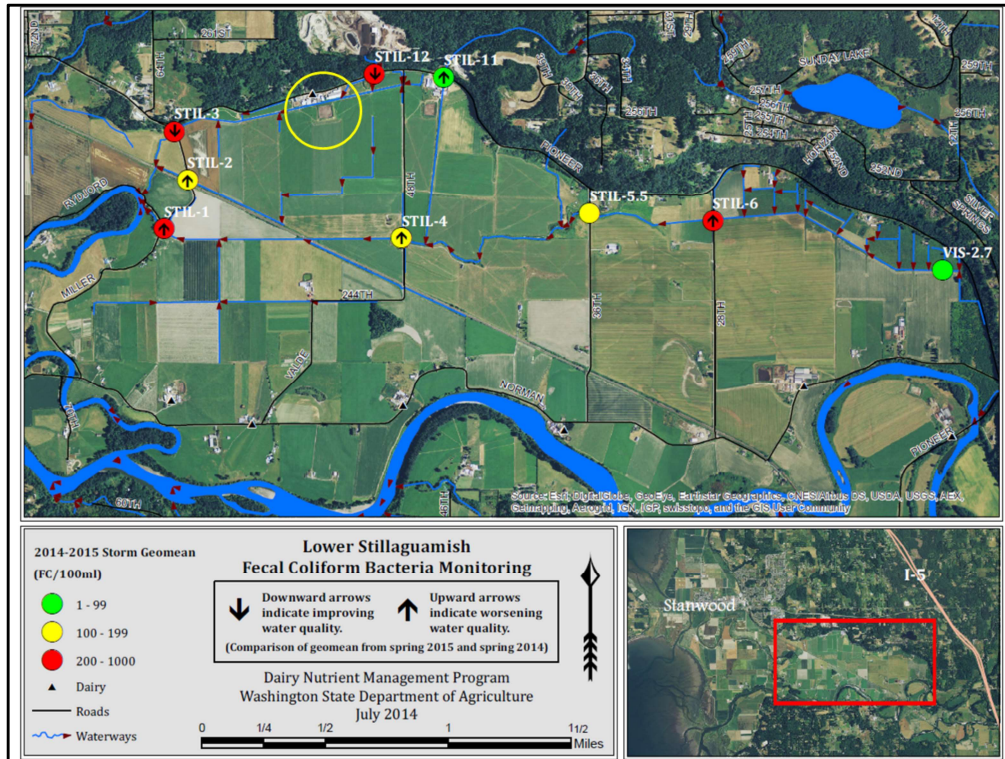
So now I want to share some positive examples of how we have worked cooperatively with the local community and landowners to address identified sources of bacterial and nutrient pollution. They include examples from Miller Creek, Silvana Terrace, and Sunday Lake, which are shown on this map in the yellow circles. For each example, I will provide some bulleted highlights followed by pictures, which I will go through quickly.



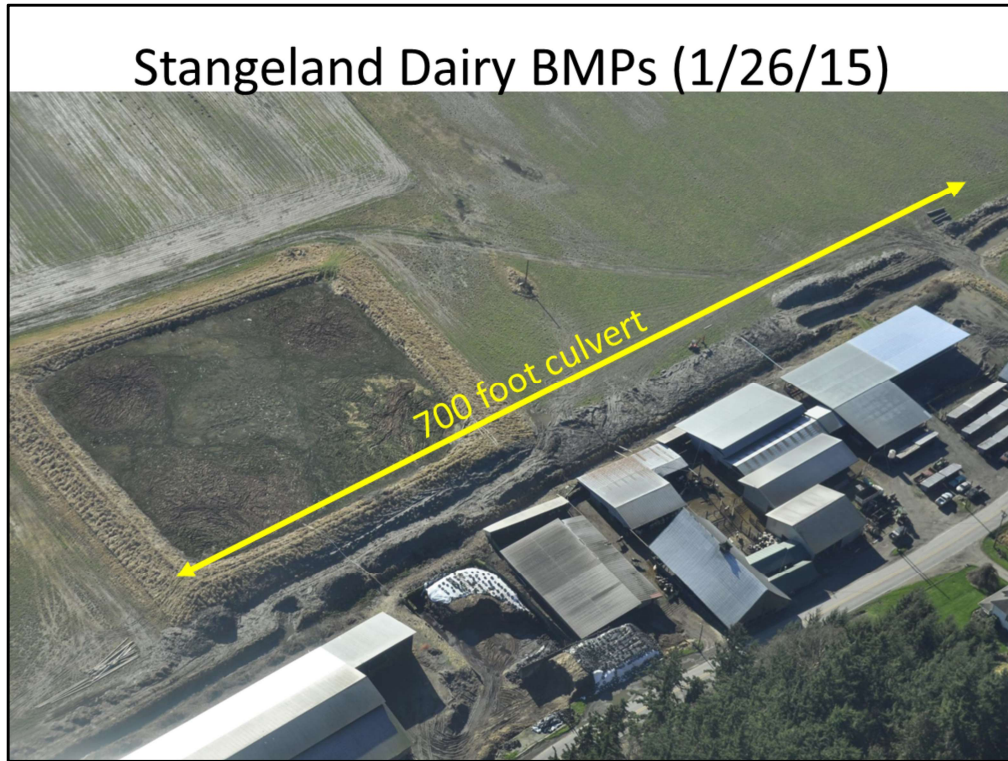
## Stangeland Dairy

- Manure contaminated runoff into ditch that drains to Old Stillaguamish Channel
- Installed 700-foot culvert and other BMPs to control polluted runoff
- Technical assistance from WSDA and SCD
- Declined cost share but implemented BMPs cooperatively despite low milk prices
- BMPs improved water quality downstream!

First is the Stangeland Dairy case.



Based on WSDA's 2014 water quality monitoring data, we identified high FC levels in the ditch downstream of the dairy.



WSDA was able to work cooperatively with the Stangelands to implement a variety of BMPs, including installation of a 700-foot culvert to separate the dairy facility from the ditch.



## R.O. Lervick Arabians Horse Stable

- Approx. 5,000 cubic yards of horse stable waste
- 30-year accumulation
- Disposal cost approx. \$55,000
- Monthly hauling with concrete storage pad
- Water and Wastewater Services

In the Silvana Terrace area west of Silvana, Snohomish County's sampling identified high FC levels downstream of the R.O. Lervick Arabians commercial horse stable. The following photos show the before and after conditions following extensive haul out of the existing pile and implementation of waste storage BMPs. The remaining corrective work for this site is to till and seed the ground to restore it to a functional pasture and small wetland.















Please join me in thanking stable managers Dennis Wigren and Tague Johnson for working cooperatively with Snohomish County, WDOE, SHD, and SCD to achieve this successful outcome.

## Partridge Horse Farm

- 3 horses
- Installed heavy use area, covered compost bins, livestock exclusion fence, riparian buffer
- Hosted SCD workshop/tour for horse owners
- Partridges reached out to neighboring horse owners
- Good turnout for a model farm tour!

Next door to the Lervick Arabians is the Partridge horse farm, which was also identified as contributing to downstream pollution. Bobby and Tania Partridge received technical and financial assistance to implement a variety of BMPs. The Partridge case is a good example of SCD's Sound Horsekeeping program.





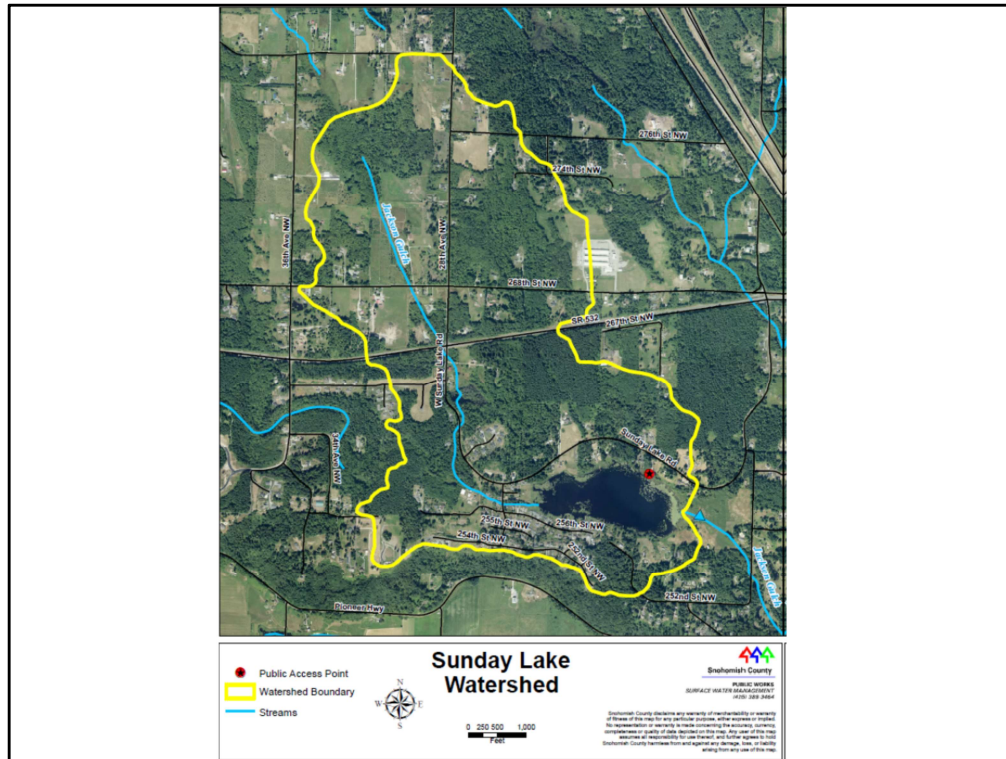
Let's recognize Bobby and Tania for their good work as responsible horse owners who have shared their experience with their neighbors and the wider community.



## Sunday Lake Contaminant Source Survey

- No major sources found
- Many septic systems and pets
- Horse properties with uncontained stable waste piles
- Migratory waterfowl
- Shallow, nutrient rich, aquatic weed problem
- Lake Wise outreach, education, and stewardship assistance underway

My last example is about our work in the Sunday Lake area. Snohomish County conducted a contaminant source survey of the Sunday Lake shoreline and the surrounding drainage area. Our PIC team collaborated with the SCD and the LakeWise team to reach out to the Sunday Lake neighborhood at a pie and ice cream social, which was well-attended.





# Sunday Lake Community

FREE  
Bring the whole family!

~ Join the fun ~  
Meet your neighbors!  
Wednesday August 26, 2015  
7:00 - 8:30 pm  
Sunday Lake Community Club  
2317 256th St NW, Stanwood

## Pie & Ice Cream Social

You're invited to a Sunday Lake Community pie & ice cream social!



Join your Sunday Lake neighbors for an evening of free refreshing desserts and fun.

**Also, learn about a community effort to keep Sunday Lake healthy.**

These efforts to help keep your lake clean are brought to you by the Sunday Lake Community Club, the Snohomish Conservation District, the Snohomish County LakeWise program and the Lopper Stillaguamish PIC program.

Registration appreciated but not required. Please email [Kathryn@snohomishcd.org](mailto:Kathryn@snohomishcd.org) or call Kathryn at 425-377-7024.





The PIC program has been funded wholly or in part by the U.S. Environmental Protection Agency under assistance agreement PC-0012601 to Washington Department of Health.

Let's thank everyone in the Sunday Lake area who are working with LakeWise to reduce phosphorous pollution from septic systems, pet waste, and lawn fertilizers.

## Resources for CWD Residents

- Savvy Septic
- LakeWise
- Sound Horsekeeping
- CWD Discretionary Fund
- Agricultural BMP cost share
- SCD technical assistance and farm planning
- SHD technical assistance
- WSDA Dairy Nutrient Management Program

As we have seen, there are a variety of resources to help CWD residents implement BMPs. I want to highlight the Savvy Septic program, LakeWise, Sound Horsekeeping, CWD Discretionary Fund.

## Program Overview

- Started April 2, 2015
- About 70% of Snohomish County's 80,000 septic systems are over 25 years old
- 3 year pilot program funded through a 50/50 match of Ecology grant funds and County Surface Water funds



[www.savvyseptic.org](http://www.savvyseptic.org)





## Program Overview

### ➤ Three Pronged Financing Program

- **Low-Interest Loans:** County-wide
- **Low-Income Grants:** Income and geographic eligibility limits
- **Rebates:** County-wide and capped at \$200 per household

### ➤ Educational Component

- Free OSS maintenance workshops for homeowners



## Savvy Septic Projects in CWD

➤ **Savvy Septic Projects in the CWD**

- **Rebates:** 57; \$5,750
- **Grants:** 10; \$66,415
- **Loans:** ~6; \$17,957



[www.savvyseptic.org](http://www.savvyseptic.org)



*Your **SEPTIC SYSTEM**  
affects your lake*

Don't let your septic system  
spoil your lake.  
Schedule routine inspections  
every three years.



*Make Clear Choices for Your Lake*

*Your **PET'S WASTE**  
affects your lake*

If it's in your yard,  
it's in your lake.  
Scoop pet waste, bag it and  
place it in the trash.



*Make Clear Choices for Your Lake*

*Your **LAWN CARE**  
affects your lake*

Have a beautiful lawn  
the natural way . . .  
Attend a FREE natural  
lawn care workshop!



*Make Clear Choices for Your Lake*

## What is Sound Horsekeeping?

Whether horses are your passion or your business, you no doubt want to keep them healthy and happy!

Sound Horsekeeping is a program just for horse owners. We know that keeping a horse is a big responsibility and Snohomish Conservation District can help you manage your pastures, prevent mud and manure problems, keep weeds at bay, and help make your chores more efficient!



The Sound Horsekeeping program offers many different types of events, such as:

[Farm Tours](#) | [Classes](#) | [Workshops](#)  
| [Online learning and activities](#) |

To find out about events, check our website or sign up for our Horse Happenings newsletter to get the latest information about events in your area. Includes tips for the season, great articles, and new Sound Horsekeeper highlights.

To sign up for the newsletter, you can find it on our Sound Horsekeeping page <http://snocd.org/shkprogram>

## About Snohomish Conservation District

### Free Services

- Soil tests
- Farm & nutrient management planning
- Pasture weed walks
- Use of manure spreader, broadcast spreader, and soil probes
- Forestry management planning
- Farm & home visits

### Other Services

- Rain barrel kits at minimal cost
- Annual plant sale in Monroe
- Classes, tours, events and speakers
- Volunteer and youth opportunities
- Free home stormwater assessments

We also have many grant areas where we can offer cost-share assistance to landowners for projects like manure composting bins, heavy use areas, gutters, riparian plantings and other projects pertaining to water quality.

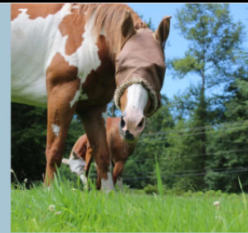
Snohomish Conservation District is a political subdivision of state government with no regulatory authority. We have been working with farmers, city residents, rural and suburban landowners on a voluntary basis since 1941. District boundaries include Camano Island and most of Snohomish County.

*Our mission: To work cooperatively with others to promote and encourage conservation and responsible use of natural resources.*

**Snohomish Conservation District**  
[www.snohomishcd.org](http://www.snohomishcd.org) | 425-335-5634  
528 91st Ave NE, Lake Stevens, WA 98258

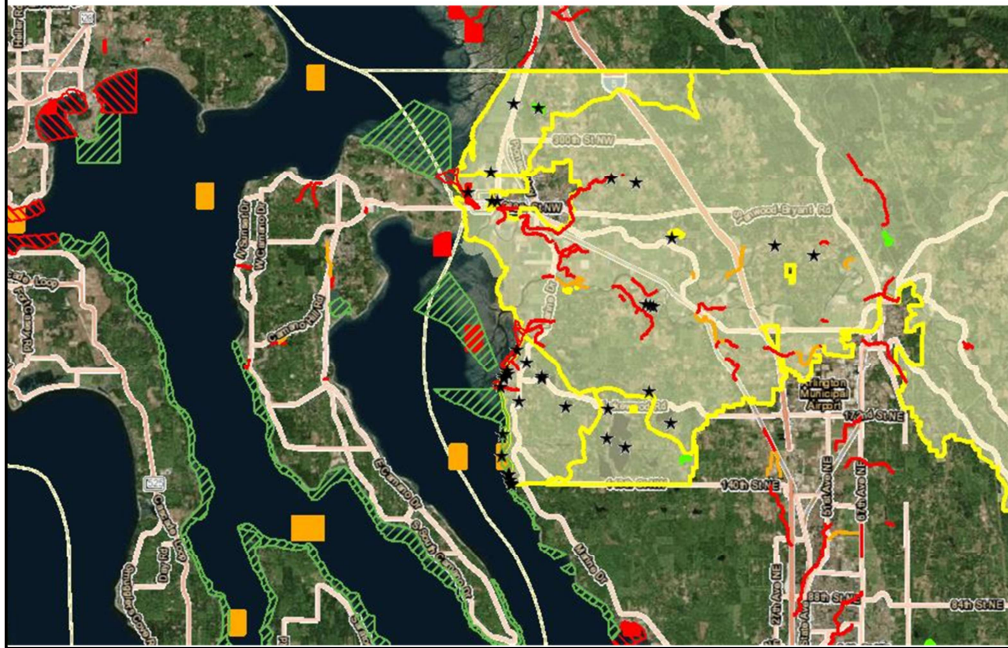
Brochure produced with funding from WA Department of Ecology, Snohomish County Surface Water Management and the Stillaguamish River Clean Water District.

# Sound Horsekeeping

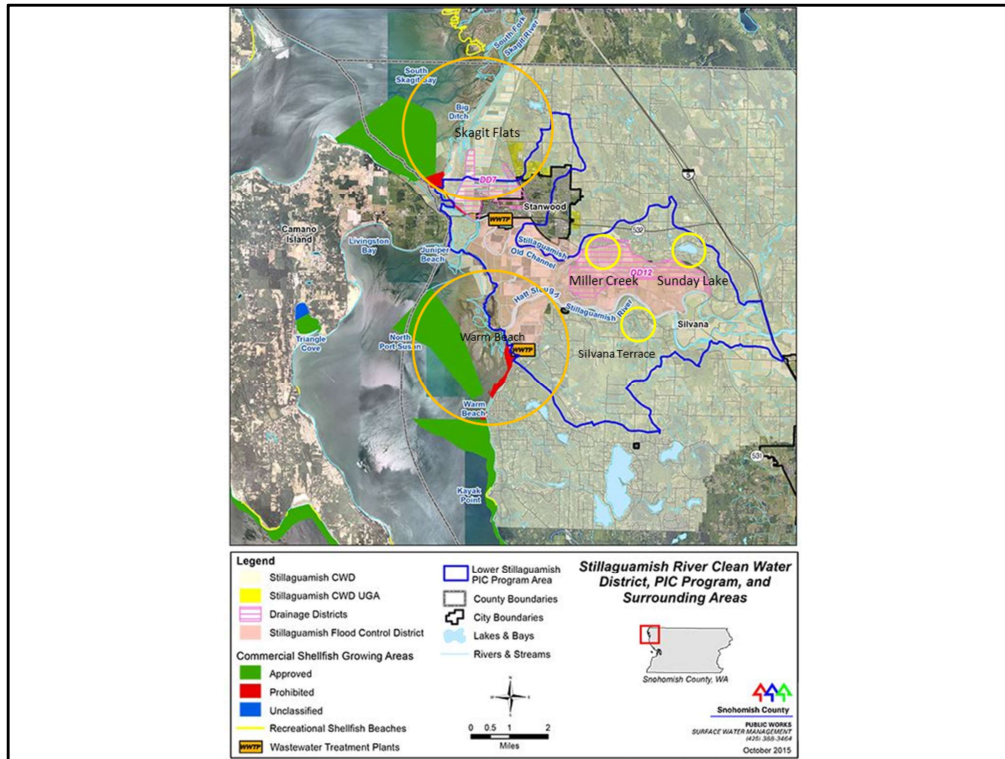


**Snohomish Conservation District**  
*working together for better ground since 1941*

## ★ CWD Discretionary Fund Projects



- DF Grant Program is available for small water quality protection and restoration projects
- Since establishing the DF Grant Program in 2011, SWM has received 50 grant applications and approved 42 for a total of \$474K in grant awards.
- Projects have included septic repairs, livestock manure BMPs, and education and outreach
- Funding awards require a recommendation by the CWD Advisory Board and approval by the SWM Director



Looking forward to 2017, Snohomish County recognizes the need to focus more PIC effort in the South Skagit Flats and Warm Beach areas. SCD is already working in these areas. SHD has also done focused sanitary surveys in these areas.



## Summary and Next Steps

- After 3 years of PIC, several big sources of bacterial pollution were identified and cleaned up
- In 2017 continue monitoring and follow up on several identified sources
- Continue focus on Miller Creek and Silvana Terrace
- LakeWise continue focus on Sunday Lake
- Expand PIC to other priority areas in South Skagit Flats and Warm Beach
- SWM-SHD 2016/2017 intergovernmental agreement \$100,000
- Lower Stilly PIC Phase 2 proposal for 2-year, \$300,000 NEP grant
- Evaluate effectiveness of CWD Discretionary Fund Grant Program
- For more information about the Lower Stillaguamish PIC Program visit the CWD information table and our web site at <http://cws.surfacewater.info>

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# Thank you!

- Kjell, Krista, and Louis Stangeland – *Stangeland Dairy*
- Tania and Bobby Partridge – *Partridge Horse Farm*
- Dennis Wigren and Tague Johnson – *R.O. Lervick Arabians*
- Brian Rowland and Judi Griffiths – *Sunday Lake*
- Deborah Knight and Kevin Hushagen – *City of Stanwood*
- Ed McDowell – *Warm Beach Christian Camp*
- Gary Lund and Tyler Breum – *Drainage and Diking District 7*
- Chuck Hazleton – *Stillaguamish Flood Control District*
- Dale Shelton, Bob Landles, Miriam Lancaster, Kelly Wynn – *Stillaguamish Clean Water District Advisory Board*